

BALDOR® • RELIANCE 

Product Information Packet

VEM4106T

20HP,3520RPM,3PH,60HZ,256TC,0936M,TEFC,F

Part Detail							
Revision:	V	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGZ601	CD Diagram:	CD0005	Mfg Plant:	
Mech. Spec:	09C103	Layout:	09LYC103	Poles:	02	Created Date:	04-22-2015
Base:	N	Eff. Date:	03-15-2022	Leads:	9#10		

Specs			
Catalog Number:	VEM4106T	Heater Indicator:	No Heater
Enclosure:	TEFC	Insulation Class:	F
Frame:	256TC	Inverter Code:	Inverter Ready
Frame Material:	Iron	KVA Code:	H
Output @ Frequency:	20.000 HP @ 60 HZ	Lifting Lugs:	Standard Lifting Lugs
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Voltage @ Frequency:	208.0 V @ 60 HZ	Motor Lead Quantity/Wire Size:	9 @ 10 AWG
	460.0 V @ 60 HZ	Motor Lead Exit:	Ko Box
	230.0 V @ 60 HZ	Motor Lead Termination:	Flying Leads
XP Class and Group:	None	Motor Type:	0936M
XP Division:	Not Applicable	Mounting Arrangement:	F1
Agency Approvals:	CSA	Power Factor:	89
	CSA EEV	Product Family:	General Purpose
	UR	Pulley End Bearing Type:	Ball
Auxillary Box:	No Auxillary Box	Pulley Face Code:	C-Face
Auxillary Box Lead Termination:	None	Pulley Shaft Indicator:	Standard
Base Indicator:	No Mounting	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	Shaft Extension Location:	Pulley End

Blower:	None	Shaft Ground Indicator:	No Shaft Grounding
Current @ Voltage:	50.000 A @ 208.0 V	Shaft Rotation:	Reversible
	46.000 A @ 230.0 V	Shaft Slinger Indicator:	Shaft Slinger
	23.000 A @ 460.0 V	Speed Code:	Single Speed
Design Code:	A	Motor Standards:	NEMA
Drip Cover:	No Drip Cover	Starting Method:	Direct on line
Duty Rating:	CONT	Thermal Device - Bearing:	None
Electrically Isolated Bearing:	Not Electrically Isolated	Thermal Device - Winding:	None
Feedback Device:	NO FEEDBACK	Vibration Sensor Indicator:	No Vibration Sensor
Front Face Code:	Standard	Winding Thermal 1:	None
Front Shaft Indicator:	None	Winding Thermal 2:	None

Nameplate NP3441LUA										
CAT.NO.	VEM4106T									
SPEC	09C103Z601G2									
HP	20									
VOLTS	208-230/460									
AMPS	50-46/23									
RPM	3520									
FRAME	256TC				HZ	60			PH	3
SF	1.15		CODE	H	DES	A		CLASS	F	
NEMA NOM. EFF	91		PF	89						
RATING	40C AMB-CONT									
CC	010A				USABLE AT 208V					
ENCL	TEFC		SER							
DE	6309			ODE	6208					
VPWM INVERTER READY										
CT6-60H(10:1)VT3-60H(20:1)										
	50Hz 20HP 190/380V 56/28A								SF1.0	

Parts List		
Part Number	Description	Quantity
SA299745	SA 09C103Z601G2	1.000 EA
RA286775	RA 09C103Z601G2	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
HW1002A63	WASHER, 5/8 HI-COLLAR SPRLCKWASHER	1.000 EA
09CB3003	CB W/1.75" DIA LD HL - 37, 39, 307 & 309	1.000 EA
09GS1000SP	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 EA
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 EA
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 EA
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 EA
09EP1100A208	ENDPLATE, MACH	1.000 EA
HA3400A33	STUD- 3/8-16 X 4.82 HEX WELKER	4.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
09EP1300A155	PUEP MACH W/309 BRG & "O" DRAIN, SLINGER	1.000 EA
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09FH4000SP	309 FH - BLACK PRIMER	1.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 EA
09GS1013SP	GS FOR 09CB3501, 12CB1500 & 12CB1503 LID	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 EA
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
PK6014	STEEL STRAP FOR 309-312 BASELESS MOTORS	3.000 EA
19XW3118A08	.31-18 X .50 HEX WASHER HEAD TAPTITE II	3.000 EA
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.080 LB
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.050 GA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 EA
NP3441LUA	ALUM SUPER-E VPWM INV READY UL CSA-EEV C	1.000 EA
40PA1017	PACKAGING GROUP, 09 VERT LARGE FLANGE	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (2100/bx) 4/22	1.000 EA
FE-0000013	ZRTG FE ASSEMBLY	1.000 EA
LD7020D09	LEAD SET, 12AWG, 9 LEAD, 20" LONG LEADS	1.000 EA

AC Induction Motor Performance Data

Record # 57538

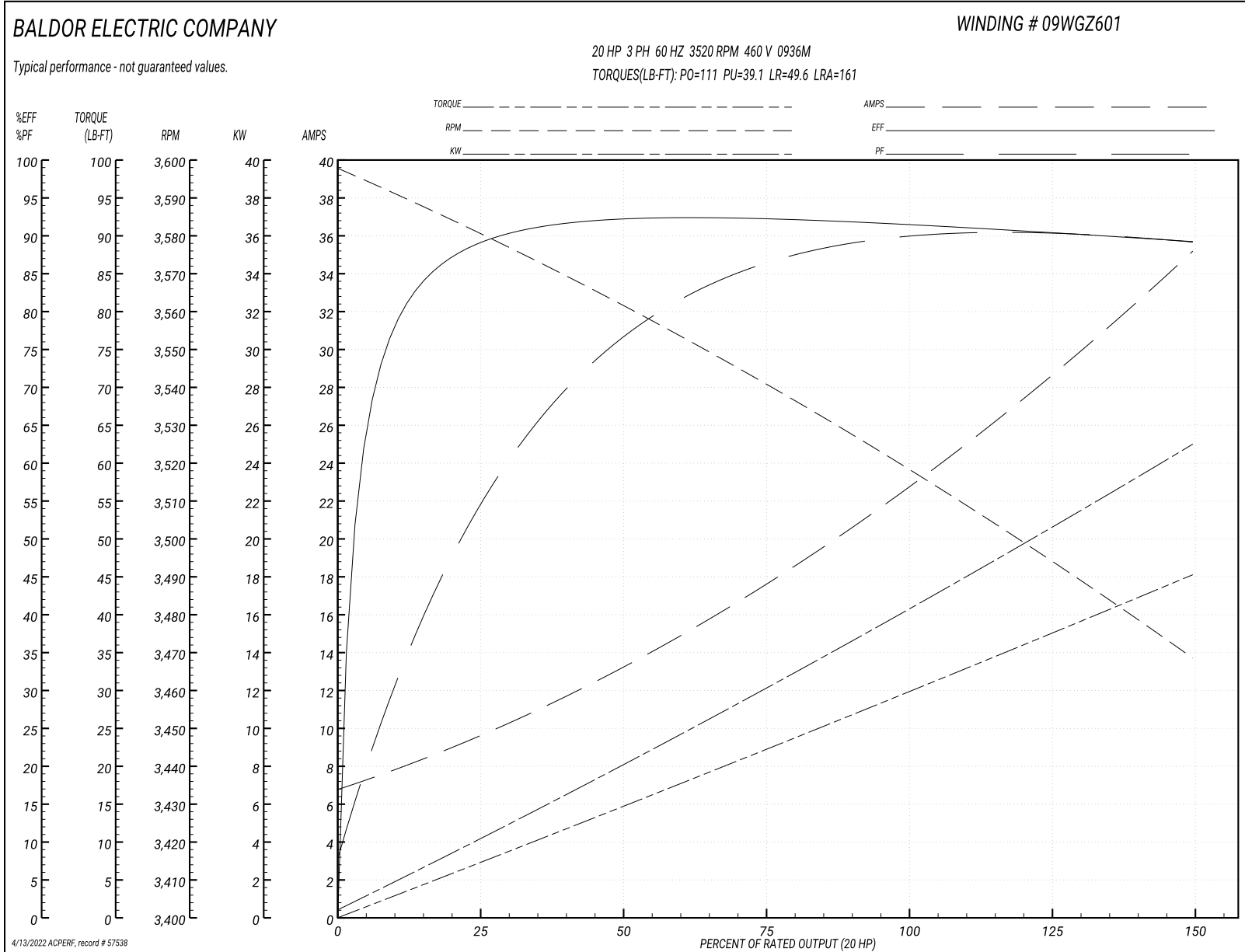
Typical performance - not guaranteed values

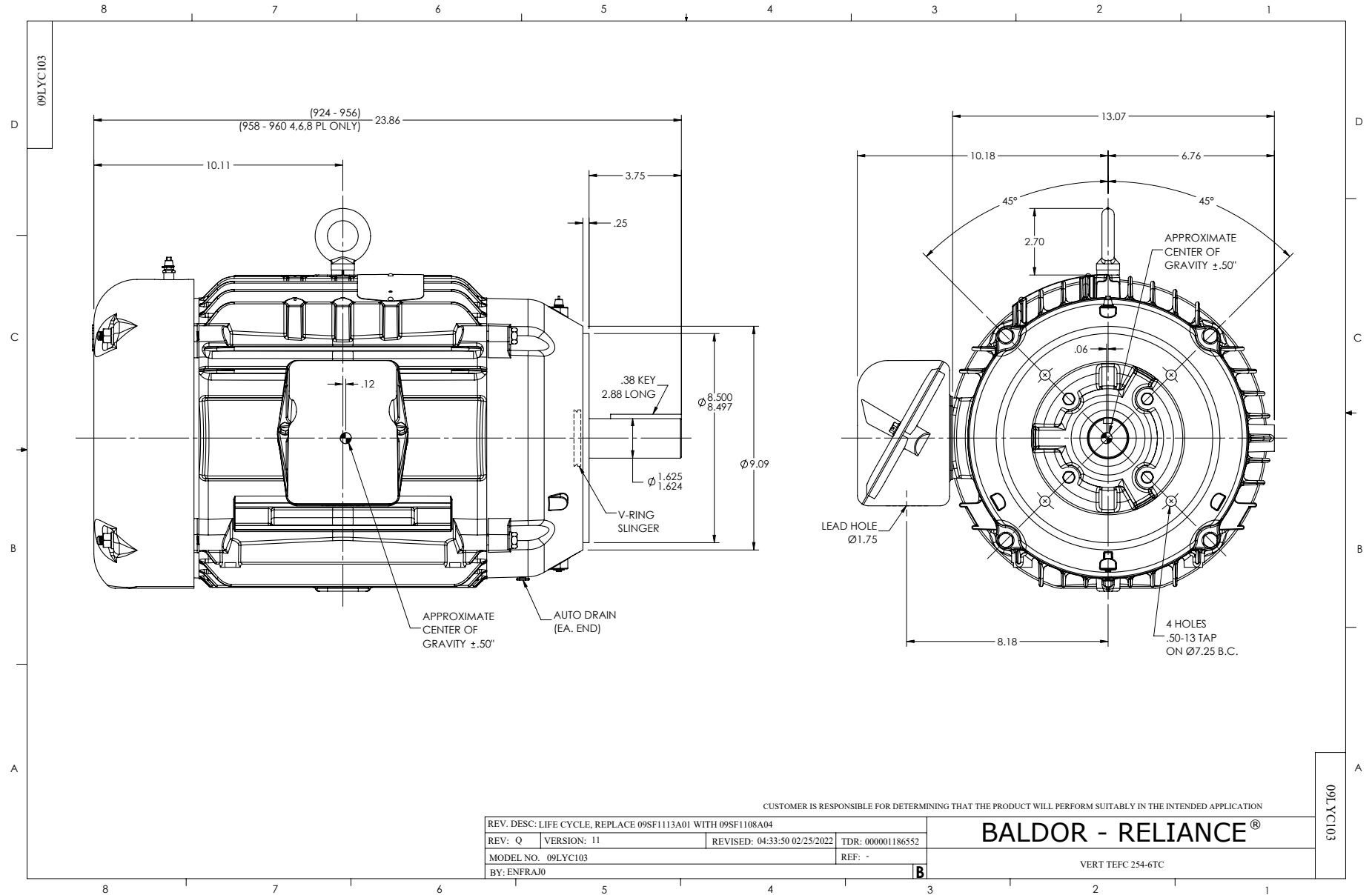
Winding: 09WGZ601-R004			Type: 0936M			Enclosure: TEFC		
Nameplate Data				460 V, 60 Hz: High Voltage Connection				
Rated Output (HP)	20		Full Load Torque	29.6 LB-FT				
Volts	208-230/460		Start Configuration	direct on line				
Full Load Amps	50-46/23		Breakdown Torque	111 LB-FT				
R.P.M.	3520		Pull-up Torque	39.1 LB-FT				
Hz	60 Phase	3	Locked-rotor Torque	49.6 LB-FT				
NEMA Design Code	A	KVA Code	H	Starting Current	161 A			
Service Factor (S.F.)	1.15		No-load Current	7.17 A				
NEMA Nom. Eff.	91	Power Factor	89	Line-line Res. @ 25°C	0.47592 Ω			
Rating - Duty	40C AMB-CONT		Temp. Rise @ Rated Load	76°C				
S.F. Amps			Temp. Rise @ S.F. Load	95°C				
			Locked-rotor Power Factor	29				
			Rotor inertia	0.92 lb-ft ²				

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	58	78	86	89	90	90	90
Efficiency	88.9	92.2	92.4	91.7	90.7	89.2	91.1
Speed	3579.6	3561.5	3541.3	3519.5	3495.4	3467.8	3505
Line amperes	9	13	17.7	22.9	28.6	35	26.3

Performance Graph at 460V, 60Hz, 20.0HP Typical performance - Not guaranteed values





CD0005



LOW VOLTAGE
(2Y)



LINE

HIGH VOLTAGE
(1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E BY: JLP

REVISED: 01/19/99 10:15

TDR: 0171435

9000D

FILE: AAA00005140

MDL: -

MTL: -

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005

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